

ABSTRACT OF THE DISCLOSURE

The present invention relates to an image processing technique for improving dot dispersion in highlight areas and shadow areas in an error diffusion method.

5 The image processing device of the invention has a plurality of types of error diffusion matrices with different diffusion ranges, and selects a matrix depending on the error that has occurred, which is then used to diffuse the error into peripheral pixels. Of the plurality of error diffusion matrices, the matrix having 10 the widest diffusion range is a matrix that diffuses error with bias in the raster direction (specifically, a matrix having a directivity factor of 2.0 or higher). If a matrix that diffuses error uniformly were employed where error must be diffused over a wide range, as in a highlight area or shadow area, error diffused 15 into individual pixels is small that, in some instances, dots are formed in proximity to one another; however, where error diffusion is carried out while switching among matrices that include this kind of high directivity matrix, formation of dots in proximity to one another can be avoided.

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Selected Figure Fig. 7F